Raspberry Pi brings out shiny Compute Module 3

January 17 2017, by Nancy Owano

Compute Module 3

(Tech Xplore)—Another Raspberry Pi launch announcement—and another burst of news items explaining what's new, at what price.

This time it is about the Raspberry Pi Compute Module 3 (CM3). *Trusted Reviews* said it comes with 64-bit and multi-core functionality.

"The new Compute Module is based on the BCM2837 processor – the same as found in the Raspberry Pi 3 – running at 1.2 GHz with 1

gigabyte of RAM," said *Hackaday*.

The Raspberry Pi blog provided the CM3 launch announcement:

"Way back in April of 2014 we launched the original Compute Module (CM1), which was based around the BCM2835 processor of the original Raspberry Pi. CM1 was a great success and we've seen a lot of uptake from various markets, particularly in IoT and home and factory automation."

Now it has a new CM3 based on the Raspberry Pi 3 hardware. Take note: It is "providing twice the RAM and roughly 10x the CPU performance of the original Module," according to the blog.

Ars Technica noted that it was the first big upgrade since 2014. That year, said *Trusted Reviews*, The original module "combined the guts of a first-generation Pi with a small SODIMM-layout module."

The new version, said Joe Roberts in *Trusted Reviews*, "which uses the same BCM2837, a quad-core 64-bit ARMv8 part, as the Pi 3, brings the Compute Module fully up to date."

There will be two flavors—CM3 and CM3L (lite) —The 'L' version is a CM3 without eMMC Flash—that is, as described by RS Components,"not fitted with eMMC Flash and the SD/eMMC interface. But pins are available for the designer to connect their own SD/eMMC device."

According to the blog, the Lite version "brings the SD card interface to the Module pins so a user can wire this up to an eMMC or SD card of their choice."

Jon Brodkin in *Ars Technica* said that the Compute Module's stripped-

down form factor makes it more suitable for embedded computing, as it fits into a standard SODIMM connector. The new Compute Module can run Windows IoT Core and supports Linux.

The latest version is being used by NEC, said Brodkin, in displays intended for digital signs, streaming, and presentations. The Raspberry Pi blog, meanwhile, said that "we're already excited to see NEC displays, an early adopter, launching their CM3-enabled display solution."

It stated pricing for the two flavors. The CM3 and CM3L are priced at $30 and $25, respectively (excluding tax and shipping), and this price applies to any size order. The original Compute Module is also reduced to $25. The blog said one can "Head on over to our partners element14 (or Farnell UK) and RS Components" to buy them.

What about backwards compatibility? According to the blog "The CM3 is largely backwards-compatible with CM1 designs which have followed our design guidelines."

The blog presented the caveats: The module is 1mm taller than the original module; "the processor core supply (VBAT) can draw significantly more current. Consequently, the processor itself will run much hotter under heavy CPU load, so designers need to consider thermals based on expected use cases."

  More information: www.raspberrypi.org/blog/compute-module-3-launch/

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